COURSE AGENDA

Day One
• Detailing Power Circuits
• Tracing Control Circuits
• Operating Series Motors
• Operating Shunt Motors
• Listing Crane Hoist Controls
• Describing Hoist Points 1-5
• Troubleshooting Hoist Direction

Day Two
• Explaining Crane Lowering Controls
• Defining Lowering Principles
• Identifying Collector Shoes
• Identifying Collector Bars
• Explaining Limit Switch Controls
• Defining Dynamic Lowering
• Troubleshooting Lowering Direction
• Utilizing Knife Switches
• Describing Off-Position Dynamic Braking
• Explaining Time limit acceleration
• Tracing Reversing-plugging Control

Day Three
• Explaining Condenser Timing
• Using Voltage Drop Acceleration
• Troubleshooting Bridge control circuits
• Troubleshooting Trolley Control Circuits
• Troubleshooting Bridge/Trolley Circuits
• Review
• Exam

COURSE NUMBER: MUS-305

Course Purpose
Upon completion of this course, the participants will be able to explain the function, design, and construction of DC cranes and the control equipment; interpret crane control prints; and troubleshoot crane control faults.

Upon completion of this course, you should be able to:
• Identify and explain component layout of a crane.
• Describe the function and operation of electrical components associated with DC cranes.
• List and describe the purpose of components located in a DC power control system.
• Describe the operation of DC motors.
• Analyze a DC schematic to determine failed component.
• Demonstrate proper troubleshooting techniques.
• Demonstrate proper maintenance associated with cranes.
Who Should Attend

- This course is designed for electrical maintenance technicians.

Prerequisites

To successfully complete this course, the following prerequisites are required:

- Understanding of electrical theory and electrical systems

Student Materials

To enhance and facilitate your learning experience, the following materials are provided as part of the course package.

- Student Manual, which contains the key concepts, definitions, and examples presented in the course
- Lab Guide which includes the hands-on exercises.

Next Learning Level

Once you have mastered the skills covered in this course, you may want to attend specific training, such as:

- Motor Control and Troubleshooting

Course Length

- This is a 3 day course.

Course Number

- The course code is MUS-305

To Register

To register for this or any other Rockwell Automation training course, contact your local authorized Allen-Bradley Distributor or your local Sales/Support office for a complete listing of courses, descriptions, prices, and schedules.

You can also access course information via the Web at http://www.rockwellautomation.com/training

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